

**Before the  
Federal Communications Commission  
Washington, D.C.**

<b>In the Matter of</b>	)	
	)	
<b>Assessment and Collection of Regulatory Fees</b>	)	<b>MD Docket No. 19-105</b>
<b>for Fiscal Year 2019</b>	)	
	)	

**COMMENTS OF T Z SAWYER TECHNICAL CONSULTANTS**

The engineering technical consulting firm of T Z Sawyer Technical Consultants (“TZS”) hereby submits these comments in response to the Commission’s Notice of Proposed Rulemaking that was adopted in the above-captioned proceeding on May 7, 2019.

TZS by its principal Timothy Z. Sawyer has provided engineering and related technical services to the telecommunications and broadcast industry regarding AM, FM and Television Broadcast facilities for nearly 50 years.

TZS focuses its comments to those sections of the NPRM that relate to the fees to be collected from Television Broadcast Stations and in particular the methodology for determining the population with the service area of low-band VHF stations operating on Television Channels 2 to 6.

In reviewing the prior year public record for the Fiscal Year 2018, (OMD 18-175) the Commission proposed once again to switch from a Television market based (DMA) assessment of

fees to that of a population within a specified service contour based fee; no objective discussion occurred regarding the contour signal value to be utilized or of its impact on fee assessment.

The Commission has stated that its goal in using population-based fees for Television follows the assessment format of other Media Bureau facilities, i.e., Radio. However, in assessing fees for Radio Stations, the Commission uses the City/Principal Community contour to determine a facility population and then applies a tiered population table further subdivided into station class. Hardly a one-size fits all assessment schedule as it is proposing to do with Television assessments based solely on the Noise Limited Service Contour of a facility (NLSC).

The very words “Noise Limited Service” implies perfect pictures at the Television receiver. There is a missing link in the logic between the field strength criteria and the concept of a “Noise Limited Service Contour,” i.e., a reliable digital picture, without pixelization or the dreaded digital cliff effect (blue screen/no service).

The 28 dBu f(50,90) NLSC for digital Television on Channels 2 to 6 is based on the FCC’s VHF (FM/TV) propagation curves to determine a predicted signal level that occurs at 50% of the locations, 90% of the time. The predicted contour distance is based on the radiated power and the antenna height above the average of the terrain over a segment of the terrain extending from 3 to 16 kilometers in a particular direction (azimuth), and does not adequately consider all the possible effects on the signal over which it must travel to reach the receiver, for example, terrain blockage which may limit the signal at a far less distance than predicted by the radiated power and antenna average height above terrain.

Additionally, if one is to be assessed a regulatory fee on a service area, it should reflect a fee based on a service level higher than just 50% of the locations. If not, then perhaps, as the population that is being counted is located at a fixed location, only 50% of the population total should be used in calculating the fee.

For simplicity, the FCC's TVStudy program computes the container size (the service area) of the station's coverage using the traditional propagation curves, but then uses a more sophisticated analysis (as defined in OET Bulletin Number 69) to analyze the signal within the container to arrive at not only the container population, but also the terrain limited population and the interference-free population within the traditional service area (i.e., the container).

Thus, there are three levels of service population that are readily available from the use of the TVStudy program that the Commission should consider. The real total population number deviates from the container population (service population) depending on the terrain (blockage) and interference levels (from co-channel and adjacent channel signals).

TVStudy also allows for easy adjustment of the container size by modification of its study parameters from the standard values used by the propagation curves for location and time and signal level (dBu).

All factors affecting the service population should be considered before assessing a regulatory fee based on the population within a contour's assigned signal level.

The other unspoken parameter (the elephant in the room) that should also be addressed is the general noise floor of the channel. The TVStudy program considers only RF sources from licensed Television spectrum users and does not consider the effects of impulse noise from electrical devices that are generated within the channel in a highly populated urbanized service area or within a viewer's home or other reception locale.

An increase in the NLSC value of 28 dBu should be considered as a general allowance for the presence of impulse noise on low VHF Television channels.

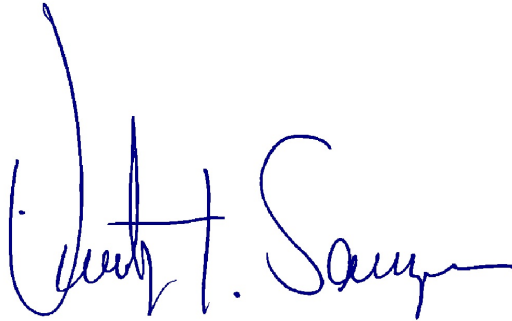
The 28 dBu "Noise Limited Service Contour" requires an honest reexamination. A 28 dBu NLSC without a perfect picture is no service at all. A facility should not be assessed a fee based on a service population that is not served due to terrain or interference from all other sources (including manmade impulse noise).

If the Commission believes the contour based methodology is the correct avenue for Television assessments, then perhaps inline with Radio assessments it should adopt the city grade contour as the base contour for Television service population as it does for Radio.

Summary:

Until such technical matters outlined above are resolved, a fee assessment based on DMA ranking should continue to be used. A population based assessment should not be considered at this time.

Respectfully submitted,

A handwritten signature in blue ink, reading "Timothy Z. Sawyer". The signature is fluid and cursive, with the first name "Timothy" and last name "Sawyer" clearly legible, and "Z." as a middle initial.

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